

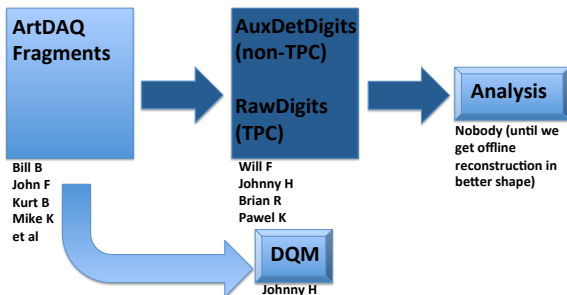
LArIAT Offline Software Update

Will Flanagan

April 28 2015

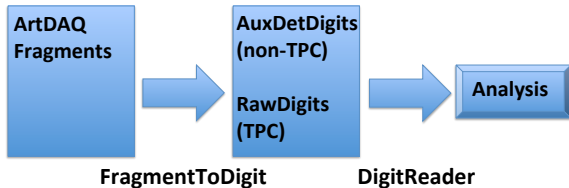


LArIAT Software Overview



- The LArIAT offline software unpacks ArtDAQ fragments and repackages them into larsoft digits (FragmentToDigit) and unpacks these digits for analysis (DigitReader).
- We are still catching up to (and learning from) the DQM modules.
- Unfortunately, we are a bottleneck for analysis.
- We are working hard and could use more hands!

LArIAT Offline Software



- The full chain is demonstrated for the V1751 PMTs and partially demonstrated for the V1740, TDC, and WUT fragments.
- We need to properly match data fragments from different triggers in order to have full event reconstruction.
- You could be running both of these modules in the next two minutes. [\[Click Here!\]](#)
 - I will be committing some major changes to FragmentToDigit in the next 24 hours.

LArIAT Offline Software Tasks

- Modularize FragmentToDigit in order to split off trigger matching and allow trigger associations to be made in a more sensible manner (Will, almost complete)
- Add in fragment matching algorithms given clock drift (Johnny, demonstrated relative clock drifts)
- Add in trigger associations (Brian, waiting on Will)
- Add V1740 boards 0-6 to FragmentToDigit so that we can have offline TPC event displays (You?)
- Validate matching between TDC triggers and 1751 triggers and show an *offline* momentum vs ToF plot (You?)